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EXAMINER

LU, TOM Y

ART UNIT PAPER NUMBER

2624

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment and written response filed on 9/22/2004 has been entered and considered.
2. Claims 1-40 were cancelled.
3. Claims 41-51 are newly added.
4. Claims 41-51 are pending.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 41-46, 48-49 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soenksen et al (U.S. Patent No. 6,711,283 B1).

- a. Referring to Claim 41, Soenksen discloses a method for making possible the identification of various microscopic contaminants (a specimen or sample 12 column 7, line 3, is the claimed contaminants) in samples by certified personnel (a pathologist column 2, line 20. the examiner notes it should be clear to a person of ordinary skill in the art that the certified personnel in Soenksen needs not be a pathologist but dependent upon the areas of medical study) in a laboratory by: using a person semi-skilled (some technician is needed to operate or start the microscopy system in Soenksen) in focusing a microscope to obtain

photomicrographs of said samples collected in their original, natural environment (figure 3A and 3B are the claimed photomicrographs of the samples. The examiner notes Soenksen does not explicitly teach the samples are collected in their original, natural environment. However, it should be obvious to a person of ordinary skill in the art, for example, to study fungi or mold, one would be motivated put a piece of carpet with the contaminant under a microscope because it is beneficial to study an sample in its natural environment without altering the state of the contaminants. The examiner notes a microscope with a camera like Soenksen's system is capable of imaging any samples of contaminants. The limitation of a natural, original environment should not carry any patentable weight, because a camera can take images of a sample regardless what kind of environment the sample is in as long as the image is a high quality image that allows a certified person to perform necessary analysis on the contaminants. If an operator prefers taking images of a sample in its natural, original environment, he/she should be able to do so. By the same token, it would be illogical to conclude that an operator in Soenksen cannot put a piece of carpet with contaminants under the microscope for imaging. The examiner further notes the quality of an image is determined by the resolution of a camera. Since the instant invention is not claiming the structure of a camera, but use of a camera as stated in the specification, page 8, lines 15-16, it does not preclude a person of ordinary skill in the art from using a high resolution camera instead of the camera disclosed by Soenksen when imaging a sample of mold or fungi that requires a high

resolution camera. In other words, an operator should be able to substitute the camera freely when an application requires it as long as the substitution of the camera does not alter the other components of the system); electronically transmitting said photomicrographs to the laboratory (image strips are combined and transmitted through the network 42 to remote locations for further study); and identifying the microscopic contaminants by a skilled mycologist or other certified person (the study in remote locations is done by a pathologist, column 2, line 20 or as in the case of fungi, it would be a mycologist).

- b. Referring to Claim 42, Soenksen discloses wherein said steps of employing, transmitting are completed “real time.” (The image acquisition and transmission are done in “real time” in Soenksen).
- c. Referring to Claim 43, Soenksen’s system can do the steps within 24 hours.
- d. Referring to Claim 44, Soenksen’s system does not use growth media or testing methodologies. The examiner notes once again, if a camera is capable imaging samples at very high resolution, there is no need for growth media or testing methodologies. See explanation in claim 41 for original, natural environment.
- e. With regard to Claim 45, as explained above, Soenksen’s system is capable of imaging any sample. Although the example given in Soenksen uses microscopic slides, it is not a must for the purpose of imaging.
- f. With regard to Claim 46, see explanation in Claim 1 above.
- g. Referring to Claim 48, the sample is placed under microscope and imaged by a digital camera, see figure 1 in Soenksen.

- h. Referring to Claim 49, Soenksen does not explicitly teach the resolution of the captured image must be at least 400,000 pixels by 800,000 pixels. However, it is understood in the art that such high resolution can be easily achieved by use of a high-resolution lens or CCD sensor. Therefore, it would be obvious to a person of ordinary skill in the art to recognize that in the event of high resolution imaging is required, a high-resolution lens or CCD can be used.
- i. With regard to Claim 51, see explanation in Claim 41 above for original natural environment.

6. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soenksen in view of Linehop (U.S. Patent No. 5,944,532). The arguments in Paragraph 5 above as to the applicability of Soenksen are incorporated herein. Soenksen discloses placing a sample, such as cells under a microscope to be scanned. However, Soenksen does not teach the sample can be fungal spores and the spores are obtained from an air-sampling mechanism. Linehop teaches it is well known in the art to collect fungal spores by an air-sampling mechanism and place the spores under the microscope for analysis (column 1, lines 17-23). At the time the invention was made, a person of ordinary skill in the art would have been motivated to place a sample of fungal spores obtained through an air-sampling mechanism under Soenksen's microscope for analysis because Soenksen teaches using his microscope for different kinds of samples, even though, Soenksen does not explicitly cite fungal spore as one of the sample, however, it is understood in the art that with aid of a high resolution CCD camera, Seonksen's microscope is capable of imaging fugal spores (column 17, line 31).

7. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soenksen in view of White et al (U.S. Patent No. 4,736,826). The arguments in Paragraph 5 above as to the applicability of Soenksen are incorporated herein. Soenksen does not explicitly teach the camera in his system is operated with battery power nor did he explain the camera is transported by a remote controlled vehicle into air ducts or beneath building structure. White teaches a mobile robot as a transporter for carrying equipments. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify Soenksen's system with a mobile robot as taught by White, and by having a camera on a robot, it would be reasonable to assume that the camera would now be operating on battery power. One of ordinary skill in the art would have been motivated to make such modification because the modified system allows the robot to obtain images in hazardous areas.

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Berry et al, U.S. Patent No. 6,014,451, see figure 1, columns 7 and 8.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y. Lu whose telephone number is (571) 272-7393. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571)-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

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TYL

JINGGEWU  
PRIMARY EXAMINER

